



**NEW HORIZON**  
**COLLEGE OF ENGINEERING**



# **DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

## **CURRENTS – NEWSLETTER**

**EEE – we Light the world**



**2020**

**AUGUST TO DECEMBER**

**Volume 9  
Issue 1**





# ABOUT DEPARTMENT

Welcome to the Department of Electrical & Electronics Engineering (EEE) at New Horizon College of Engineering (NHCE), Bangalore. EEE is one of the prestigious branches of Engineering and one among the oldest departments of NHCE-Bangalore started in 2001. The EEE Department has been playing a vital role in producing engineers and technologists of high caliber ever since it was established in the year 2001. The Department is accredited by NAAC with 'A' Grade and accredited by NBA. The vision of EEE Department is to create contemporary Engineers, innovators and entrepreneurs to make a better nation and in turn, a better world. A critical investigation and innovation into the modern state-of-art and cutting edge technology lead to the fact that an electrical graduate fits better in today's competitive world.

The strength of the department is highly qualified faculty members with expertise in various fields of electrical engineering, state of art laboratory facilities. The department is inclined towards bridging the gap between Industry and academia by collaborating with Multinational Companies in the field of Electrical Engineering.

Indo-French Center of Excellence in Electricity, Automation and Energy (IFCEEAE) is one such initiative evolved through "MoU" with French Ministry of National Education and Schneider Electric India Pvt. Ltd., The main objectives of IFCEEAE are

- To train the students of all streams of engineering in automation field
- To facilitate interdisciplinary and applied research with a focus on innovative product development
- To provide excellent career opportunities to students through exchange programs with French Universities, industrial training, innovative learning and R & D activities especially in the areas like Smart Grid, Internet of things (IoT), Energy Management Systems, Embedded systems, Supervisory Control and Data Acquisition (SCADA) and industrial automation.

The Department nurtures the young minds beyond the curriculum by facilitating technical clubs in promoting technical events, community development/society impact and universal value/ethics programs. Electrical & Electronics engineering students have a greater exposure and flexibility in campus placement both in core industries, IT sectors and Public Sector Units.

## VISION

To evolve into a centre of excellence in Electrical and Electronics Engineering for bringing out contemporary engineers, innovators, researchers and entrepreneurs for serving nation and society.

## MISSION

- To provide suitable forums to enhance the teaching-learning, research and development activities.
- Framing and continuously updating the curriculum to bridge the gap between industry and academia in the contemporary world and serve society.
- To inculcate awareness and responsibility towards the environment and ethical values.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- PEO 1:** To provide good learning environment to develop entrepreneurship capabilities in various areas of Electrical and Electronics Engineering with enhanced efficiency, productivity, cost effectiveness and technological empowerment of human resource.
- PEO2:** To inculcate research capabilities in the areas of Electrical & Electronics Engineering to identify, comprehend and solve problems and adopt themselves to rapidly evolving technology.
- PEO3:** To create high standards of moral and ethical values among the graduates to transform them as responsible citizens of the nation.



# MESSAGE FROM PRINCIPAL & HOD

Dear all,

In our college, we and our faculty always think we need to teach beyond curriculum so as to make our students 'Industry Ready'. Recent observations made by many stalwarts in the industry indicate the fact that a majority of Engineering Graduates out of colleges are not employable. NHCE has always been in the forefront in ensuring that students are employable. It gives me immense pleasure to pen a few words as prologue to the in-house 2020 Newsletter of the EEE Department. The issue is designed to present the events that have occurred as well as technical write-ups which makes the issue resourceful and informative. I congratulate all the contributors and also the editorial board for bringing out such a nice issue. Happy Reading.



**Dr. MANJUNATHA**  
**PRINCIPAL, NHCE**



**Dr.M.MAHESH**  
**HOD EEE,NHCE**

Dear readers,

I feel happy to release Newsletter titled as "Currents" 2020. Our editorial team has done an appreciable job in reporting all the events which have taken place in the Department over a time period of five months, even during this pandemic. As an icing on the cake, our Newsletter is presenting you the success of major events witnessed by students and participants of Electrical Engineering fields. The objective of the Technical Newsletter is to inform, engage, inspire and entertain a diverse readership including students, faculty, parents and alumni- with a timely and honest portrait of our Department activities. This chronicle has made an earnest attempt in this direction and all the credit for its success falls upon faculty and students who have worked with dedication and enthusiasm to bring this forward. I convey my regards to all the readers.

# **EDITORIAL TEAM**

## **FACULTY ADVISORS**



**Dr.M.MAHESH**  
**HOD EEE,NHCE**



**Prof. RASHMI N**



**Prof. DEEPA V.B**

## **STUDENT CO-ORDINATOR**



**Mr. NISCHAL DINESH**



## MOMENTS OF THE DEPARTMENT

Mr. Thomas BRIERE from France has been appointed as Director of Indo-French Centre of Excellence Electricity, Automation and Energy (IFCEEAE) and Dr. M. Mahesh, HOD EEE is appointed as Co-Director of IFCEEAE.

The Department of Electrical and Electronics Engineering arranged an interactive session with faculty with the Director from France. Dr. M. Mahesh, HOD EEE welcomed director Mr. Thomas BRIERE whole heartedly on behalf of Department, faculty, students of NHCE . Mrs. Deepa V B introduced the director professional credentials and recognitions earned during his career, which conveyed directors achievements the all assembled people.

The Director interacted with faculty by defining the importance of automation, suggested faculty to come up with R&D proposals in automation and extended his support in carrying out research activities in the automation field. Later faculty also introduced themselves to the director mentioning their area of interest which received appreciation from him.



Also, in this moment few faculties are honored to receive Certificate of Appreciation from Mr. Thomas BRIERE Director of IFCEEAE, Schneider Electric, for empowering para teaching faculties in Three-day hands-on Workshop on "Introduction to Data Entry/ Analysis Using Microsoft Excel & amp ; Introduction to Arduino Embedded System" which was organized by QASDC Department of NHCE and in association with Department of EEE.



# STUDENTS ACHIEVEMENTS

## DECEMBER EVENT:

Congratulations to the winners Arnab Goswami, Shruthi Singh, Swati of 1<sup>st</sup> year of NHCE and Nayrah from 5th semester EEE of "War of Words" a debate challenge that was organised by Green energy Clubby organizer Mr.Vinod kumar S, faculty, Department of EEE, New Horizon College of Engineering. Around 60 students participated in the event from various Departments of NHCE. Hearty congratulation by HOD & faculty to all the winners.

## OCTOBER EVENT:

Congratulations to SUSHMITHA T S, DARSHINI MACHAMMA M S, NAYRAH M A, NISCHAL DINESH, SARTHAK DAS students of 5th semester, Electrical & Electronics Engineering Department, NHCE for attending online Short term courses organized by NITK-STEP & Department of EEE, National Institute of Technology Karnataka, Surathkal, in the month of October 2020, under the guidance of Dr.Vinoth Kumar K.

Students gained knowledge on courses they opted and shared positive feedback for the session they attended for about a week during this pandemic. Here are the shared certificates of participation. Students attended courses like "Design and Control of Power Electronic Converters & its Applications and PCB Design using Open Source Tools".



**Pic:** Certificates of online Short-term courses organized by NITK-STEP

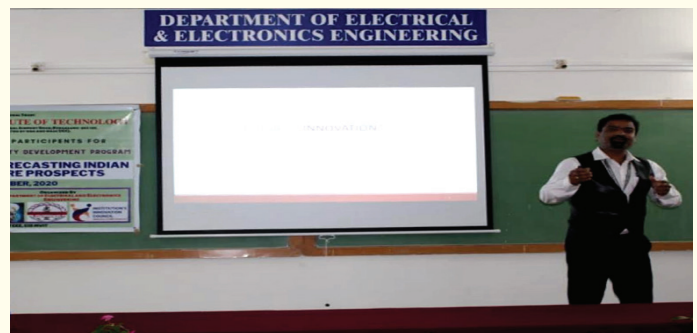
# FACULTY ACHIEVEMENTS

## DECEMBER EVENT:

Congratulations to Dr. M Mahesh, Prof. & Head Electrical & Electronics Engineering Department for being recognized as resource person for AICTE sponsored two weeks Faculty Development Program (Off-Line) - at Sir M. Visvesvaraya Institute of Technology, Bengaluru, on 10-12-2020. Delivered lecture in two sessions as mentioned below.

**Session 1:** Overview and advancement of peak load saving methods using smart grid technologies

**Session 2:** High power density trends, converters for various power applications. Program was conducted successfully with positive feedback from participants.



**Pic:** Dr.M.Mahesh, resource person in AICTE sponsored two week FDP at Sir M.V Institute of Technology, Bengaluru





Congratulations to Dr.Vinoth Kumar K, Associate Professor from Department of EEE, NHCE has been elevated / promoted to IEEE Senior Member Grade dated on 23rd November 2020 by Dr.Toshio Fukuda IEEE President and CEO, USA. The IEEE Senior membership is an honour bestowed only to those who have made significant contributions to the profession.

## SEPTEMBER EVENTS:

- Congratulations to Dr.Vinoth Kumar K, Associate Professor from Department of EEE, NHCE delivered the lecture in National Webinar on "Condition Monitoring of Electrical Machines" at Nehru Institute of Engineering and Technology, Coimbatore on 27th September 2020.

Congratulations to Dr. Mohan Das as he was recognized as a Resource Person & delivered Keynote addresses in VSB college of Engineering. The event was an AICTE Sponsored FDP/STTP Phase-II " Formal Modeling, Control and Real Time Implementation of Cyber Physical Systems " on 18th November 2020, 10.00 AM for faculty and Students of AICTE Institutions. Program was conducted successfully with positive feedback from participants.

## BOOK / PAPER PUBLICATIONS BY FACULTY:

Congratulations to Dr.VinothKumar.K. for publication on the topic., "Performance based algorithm for DWT and DCT for ISL". Materials Today Proceedings, in Elsevier, Publisher Date of submission / Expected: 29 August 2020 , Status: Published in Online 11 December 2020.

- Congratulations to Dr. VinothKumar.K. for publication on topic "The generalized non-linear fresnel transform and its application to image encryption". Materials Today Proceedings, in Elsevier, Publisher Date of submission / Expected: 16 October 2020 , Status: Published in Online 10 December 2020

- Dr. Vinoth Kumar K published a book titled "Model Based Design of Power Electronics Multi-Paradigm Numerical Computing", LAMBERT Academic Publishing Mauritius, First Edition, September 2020. ISBN: 978-620-2-68039-4

- Congratulations to Dr.B.Gunapriya, Associate Professor, for the paper publication on Interleaved Boost Converter Based Photovoltaic Array System Employing Fuzzy Based MPPT for the Rapid Change of Solar Irradiance, BBRC- Bioscience Biotechnology Research Communications Special Issue Volume 13 Number (4) 2020

- Congratulations to Dr.B.Gunapriya, Associate Professor, for the paper publication on Frequency control of PV-connected micro grid system using fuzzy logic controller, <https://doi.org/10.1016/j.matpr.2020.10.255>– Materials Today Proceedings Elsevier / ISSN: 2214-7853

- Congratulations to Dr.B.Gunapriya, Associate Professor, for the paper publication on Improved Brain Emotional Learning Based Intelligent Controller for Brushless DC Motor Drive, Journal of Green engineering, alpha publishers-JG Engg -ARTICLE IN PRESS-Available online 18 December 2020

- Congratulations to Dr.B.Gunapriya, Associate Professor, for the paper publication on Realization of Virtual Environment through LabVIEW Platform Ref. No.: MATPR-D-20-06957R1--ARTICLE IN PRESS-Available online 18 December 2020

- Congratulations to Dr.B.Gunapriya, Associate Professor, for the paper publication on BELBIC study for PMBLDC Motor drive system in Industrial applications, Vol. 700, Lecture Notes in Electrical Engineering, Springer /ISBN 978-981-15-5262-Advances in Automation, Signal Processing, Instrumentation and Control- Article in Press-Available online December 2020



## Congratulations to Dr.B.Gunapriya, Associate Professor, EEE, NHCE for the contribution of following PATENTS along with team members.

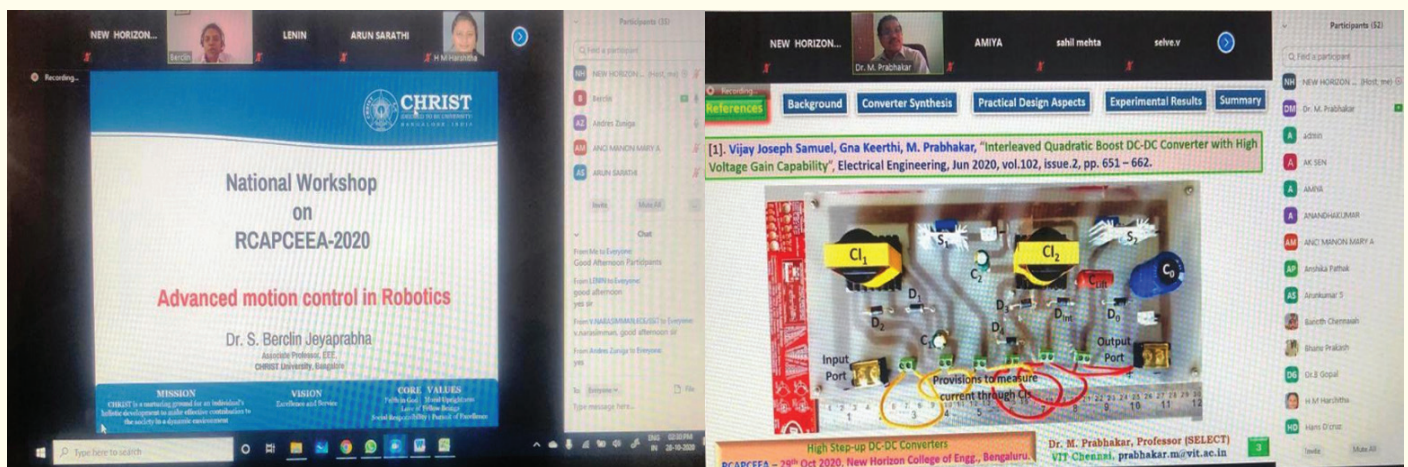
- titled SOLAR POWERED ELECTRIC TRICYCLE FOR PHYSICALLY CHALLENGED PERSONS and got patented on 20/11/2020, with Application No. 202041049220A
- titled DETECTION OF ROTOR FAULTS ON SYNCHRONOUS MOTOR USING MOTOR CURRENT SIGNATURE ANALYSIS AND INSTANTANEOUS POWER ANALYSIS METHOD and got patented on 03/10/2020, with Application No. 202011043068
- titled FILED A PATENT ON AN IMPROVED BELBIC CONTROLLER FOR PMBLDC MOTOR DRIVES USING EMOTIONAL LEARNING TECHNIQUES and got patented on 07/08/2020, with Application No. 202041030788 A

## OCTOBER EVENTS:

- Congratulations to Dr.Vinoth Kumar.K. for publication on the topic "Performance analysis of QZSI for PV integrated grid system", in International Journal of Advanced Trends in Computer Science and Engineering, in October 2020.

- Congratulations to Organizer Dr.Vinoth Kumar K and Dr.Gunapriya B from Department of EEE, New Horizon College of Engineering has organized the AICTE Sponsored "National workshop on research challenges in advanced power converters for electrical engineering applications - RCAPCEE-2020" in association with IEEE NHCE from 27<sup>th</sup> – 29<sup>th</sup> October 2020, in two Session from 11.30 AM – 1.00 PM & 2.30 PM – 4PM for Faculty, Research Scholars and for Students of all the Engineering Colleges / Universities and also for people working in Industries, via online ZOOM platform.

Program defined the concept of current research trends in advanced power converters strategies for electrical engineering applications domain. Generally power electronics is interdisciplinary in nature and is used in a wide variety of industries from areas of energy storage systems and charging infrastructures for electrification applications. It is envisaged that this program facilitates researchers, industry, academia and students to apply the current research challenges of digital control pertinent to the power electronic converters and drives with electrical engineering applications domain. The program aspects are advanced power converter techniques of energy saving scheme in electric drives, motion control in robotics. The Eminent experts from academia and Industry delivered the lectures in the workshop program.



**Pic:** National workshop on research challenges in advanced power converters for electrical engineering applications - RCAPCEE-2020



# AICTE SPONSORED SHORT TERM TRAINING PROGRAM

The Department of EEE, New Horizon College of Engineering organized the Six days online – AICTE Sponsored Short Term Training Program on “Smart Grid Technologies for Energy Efficiency and Active Demand Side Management Phase I: – “Introduction to Smart Grid Technologies; Opportunities and Challenges in Future world – Case Studies”. During 7th to 12th December 2020. Faculty from various intuitions have benefited by attending this six days STTP. The main aim of this STTP is to train the trainer by providing theoretical and practical skills on Energy Efficiency and Active Demand Side Management with the latest smart grid technologies. Congratulations to the organizers.



**Six days AICTE sponsored  
Online Short-Term Training Program (STTP)  
on  
“SMART GRID TECHNOLOGIES FOR ENERGY EFFICIENCY  
AND ACTIVE DEMAND SIDE MANAGEMENT”**

**Phase I  
“Introduction to Smart Grid Technologies; Opportunities and  
Challenges in Future world – Case Studies”**

**7<sup>th</sup> to 12<sup>th</sup> DECEMBER 2020**

Organized by  
Department of  
**ELECTRICAL AND ELECTRONICS ENGINEERING**



**CHIEF PATRON**  
Dr. MOHAN MANGHANI  
CHAIRMAN, NHEI, BANGALORE

**PATRONS**  
Dr. MANJUNATHA  
PRINCIPAL, NHCE, BANGALORE

Dr. GOPALAKRISHNAN K  
PROF & DEAN – R&D, NHCE

Dr. M S GANESHA PRASAD  
PROF, DEAN & HEAD  
MECHANICAL ENGINEERING

**CONVENER/ ORGANISING SECRETARY**  
Dr. MAHESH M  
PROF & HEAD  
ELECTRICAL AND ELECTRONICS ENGINEERING

**ORGANIZING COORDINATORS**  
Dr. SINGARAVELAN A

**ORGANIZING COMMITTEE**  
Mr. VINOD KUMAR S  
Mr. MOHAN B S

**REGISTRATION**  
<https://forms.glo/fnKqzr8639tawYo9>

**WHATSAPP GROUP FOR UPDATES**  
<https://chat.whatsapp.com/Jul5pmhQYisLOdUWxQ2>

[www.newhorizonindia.edu](http://www.newhorizonindia.edu)

**Resource Persons FN (10:00 AM to 12:00 PM)**

**POWER CONTROLLERS FOR WIND ENERGY CONVERSION  
SYSTEM IN SMARTGRID**  
Dr. Vinod Kumar S, Assistant Prof.,  
IITM Kanchipuram

**SMART GRID'S AND EVOLUTION OF COMMUNICATION  
PROTOCOLS IN T&D SUBSTATIONS**  
Mr. Annapurna Chavagalla, Senior  
Tech Engineer,  
O&S Systems

**CONTROL OF INVERTERS IN MICROGRID WITH  
DISTRIBUTED BATTERY ENERGY STORAGE**  
Dr. M. K. Srinivas,  
Professor,  
Vellore Institute of Technology, Vellore

**POWER CONVERTERS IN SMART GRID TECHNOLOGIES**  
Dr. S. Sridhar Reddy,  
Associate Professor,  
National Institute of Technology  
Tiruchirappalli

**POWER QUALITY ENHANCEMENT WITH SHUNT  
ACTIVE POWER FILTERS**  
Dr. Anand Subramanian, Professor,  
Parvathi Engineering College,  
University, Gudalur

**RECENT CHALLENGES, INNOVATIONS AND  
ADVANCEMENTS IN SMART GRID TECHNOLOGY**  
Dr. Balakrishna P, Senior Level R&D  
Engineer, Oil Gas Energy  
Hyderabad.

**Resource Persons AN (2:00 PM to 4:00 PM)**

**VOLTAGE STABILITY MONITORING AND CONTROL IN SMA  
GRID ARCHITECTURE THROUGH SYNCHROPHASOR  
MEASUREMENTS**  
Dr. Mahesh Kumar Varma, Principal,  
Indian Institute of Technology/VIT-Vellore

**SECURITY AND PRIVACY ISSUES IN SMART GRID:  
CYBER PHYSICAL SYSTEM APPROACH**  
Dr. Indira Rana,  
Assistant Professor, Senior Grade,  
Vellore Institute of Technology, Chennai.

**SMART GRID TECHNOLOGIES:  
FUTURE OF INDIAN POWER SYSTEM**  
Dr. Vikram S. Marthi,  
Associate Professor and Head,  
Vellore Institute of Technology & Science (VITS), Palani

**INTELLIGENT POWER CONTROL ARCHITECTURE FOR  
DISTRIBUTED ENERGY RESOURCES EFFECTIVE  
POWER MANAGEMENT**  
Dr. Rajendra Kumar Pandey, Professor,  
Indian Institute of Technology, Varanasi

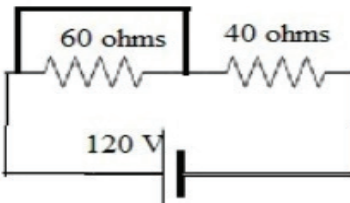
**SMART BUILDING ENERGY SYSTEMS**  
Dr. V.S.K.V. Harish, Assistant  
Professor, Pannipati Deemed to be  
University, Gandhinagar

**VIRTUAL POWER PLANT(VPP)/MICROGRID**  
Dr. Dharmapriya Das,  
Professor,  
Indian Institute of Technology- Kharagpur

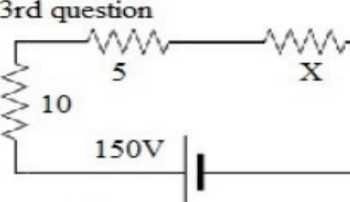
## ACTIVITIES TO STUDENTS BY FACULTY

### Basic Electrical Engineering Quiz

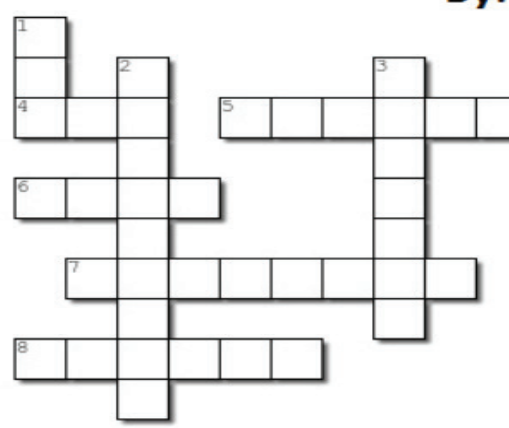
By: Mohan BS, Sr.A.P



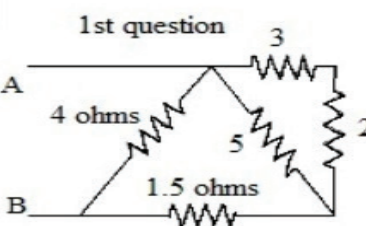
1st question



3rd question



1st question



**Horizontal**

- A current of 5A flows in a resistor of 2 ohms for 20 hours. Calculate the number of electrical units consumed by it.
- In a \_\_\_\_\_ circuit, the total resistance is greater than the largest resistance in the circuit.
- Voltage across 60 ohms is?
- In a \_\_\_\_\_ circuit, the total resistance is smaller than the smallest resistance in the circuit.
- Kilowatt-hour(kWh) is a unit of?

**Vertical**

- Calculate the equivalent resistance between A and B.
- When the current through an inductor decreases, the amount of energy stored in the electromagnetic field
- What is the value of x if the current in the circuit is 5A?



## CLUB ACTIVITIES

"War of Words" was a debate challenge that was conducted passionately by Green energy Club. The Department of Electrical and Electronics, on 11<sup>th</sup> Nov 2020 to bring out the best and to acquire knowledge on various topics and enhance the participants communication and debating skills.

Around 60 participants participated and the winners were Arnab Goswami, Shruthi Singh, Swati and Nayrah from NHCE. Congratulations to Green Energy club members and the club coordinator Mr. Vinod kumar s for successful conduction of the event.

"GREEN FEST-2020" that was conducted by the Green energy Club, Electrical and Electronics Department, on 14<sup>th</sup> and 15<sup>th</sup> of December, 2020 to bring out the best of the participants, to acquire knowledge on various topics and enhance the participants communication skills, creative skills and their knowledge about various locations. Four events were planned POSTER MAKING, DECIPHER, WHERE AM I??, THOUGHT BULB. Around 150 participants participated for the two days event. The event was inaugurated by HOD, Dr. M Mahesh in the presence of faculty coordinator, Mr. Vinod Kumar S and all the participants. The event was hosted by Soumyashree, Shariq Ahmed and Likitha, members of the Green Energy Club.



**NEW HORIZON COLLEGE OF ENGINEERING**  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING  
GREEN ENERGY CLUB PRESENTS  
**GREEN FEST 2020**  
ON THE OCCASION OF NATIONAL ENERGY CONSERVATION DAY  
EVENTS  
POSTER MAKING  
WHERE AM I ?  
DECIPHER  
THOUGHT BULB  
14th and 15th DECEMBER 2020  
E-CERTIFICATES WILL BE PROVIDED TO ALL PARTICIPANTS

For more details Contact  
Bindhu V 9620362611  
Bhavana Singh 9845189086  
Faculty Incharge  
Mr. Vinod Kumar S



**NEW HORIZON COLLEGE OF ENGINEERING**  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING  
GREEN ENERGY CLUB PRESENTS  
**GREEN FEST**  
DECEMBER 14th AND 15th  
Events :-  
1) Poster Making  
2) Where am I ?  
3) Decipher  
4) Thought bulb  
E-certificates will be provided to all the participants  
FACULTY INCHARGE :-  
Mr. Vinod Kumar S  
FOR MORE INFO:-  
BINDHU REDDY: +91 96203 62611  
BHAYANA SINGH: +91 98451 89086



## WINNERS OF GREEN FEST-2020

### The winners of the POSTER MAKING HANDMADE:

1. Deepak Yadav - M39
2. Harshita Mahapatra - P14
3. Vimarsha Rudresh - M32

### DECIPHER:

1. Sabreesh S - INH18AU047
2. Vishwas K - INH19EC757
3. Jennifer - INH19EC044

### THE WINNERS OF WHERE AM I??:

1. Swathi R - 0-04
2. Ankita tandon - INH18CS023
3. Shivini Sampath - INH18CS745

### THE WINNER OF THOUGHT BULB:

1. Jennifer - INH19EC044
2. Akangsha Das - I-13
3. Shruti Singh - M19 & Swati R - 0-04

The event was successfully completed with vote of thanks by Mr. Vinod Kumar S. All the participants were provided with the E-certificates. This event engaged the students in a fun filled activity and also helped them bring out their thoughts on the environmental issues and the current affairs.

## NOVEMBER- DECEMBER EVENT

In this program 'SoftVidya' the expert faculties of Electrical and Electronics Engineering Department have voluntarily given their precise time for the students to teach the various software tools used in real time application in 'Engineering' domain.

The main aim of the program was to understand the conceptual as well as practical knowledge of electrical domain & latest technologies being used to achieve the same. Learning various tools available for modelling & simulating different real time applications in 'Electrical & Electronics Engineering' domain.

Also understand the conceptual as well as practical knowledge of industrial & latest technologies being used to achieve the same.



The sessions were handled by Dr.Vitnothkumar, Dr.Gunapriya, Dr.Singaravelan, Dr. Prabhakaran Ms.Anitha A and Ms.Deepa V B on various software tools from 11<sup>th</sup> November 2020 to 16<sup>th</sup> December 2020 two days a week.

The event was organized by Ms. Deepa V B, Dr. Vinoth Kumar S under E-Soft club and coordinated by following student members of the club. Md. Sagar Khan-Vice President, Ashwini L B-Treasurer Md. Numan Bhat-Core Member, Sarthak Das-Core Member Prajwal- Core Member, Utkarsh K A- Core Member.

The event was successfully completed and addressed by HOD Dr.M. Mahesh with vote of thanks by Ms.Deepa V B. All the participants were provided with the E-certificates. Congratulating all for successfully completing the program.

**NEW HORIZON COLLEGE OF ENGINEERING**  
Accredited by NAAC with 'A' Grade. Accredited by NBA.  
New Horizon Knowledge Park, Ring Road, Baramba Park, Bangalore 560 103

**50th Anniversary**  
1970-2020

**IEEE**  
MEMBER SOCIETY

**ISTE**  
MEMBER SOCIETY

**Department of Electrical and Electronics Engineering**  
**E-Soft Club Presents A 9 Days Crash Course**  
**"Soft Vidya"**  
From 11<sup>th</sup> November, 2020

**Event Schedule:**

Sl No	Resource Person	Date	Timing	Topic
1	Dr. Vinoth Kumar K	11-Nov-2020	04:00PM-05:30PM	LabVIEW
2	Dr. Vinoth Kumar K	20-Nov-2020	04:00PM-05:30PM	MATLAB Basics
3	Dr. Vinoth Kumar K	25-Nov-2020	04:00PM-05:30PM	Simulink Basics
4	Ms. Anitha A	27-Nov-2020	04:00PM-05:30PM	Simulink Basics
5	Dr. Guna Priya B	2-Dec-2020	04:00PM-05:30PM	Multisim
6	Dr. Singaravelan A	4-Dec-2020	04:00PM-05:30PM	Tinkercad, Proteus
7	Dr. Prabhakaran N	9-Dec-2020	04:00PM-05:30PM	MPLAB/ Keil
8	Mr. Joshua Daniel Raj	11-Dec-2020	04:00PM-05:30PM	Xilinx
9	Ms. Deepa V Bolanavar	16-Dec-2020	04:00PM-05:30PM	Unity Pro

**Event Organizers:**  
**Faculty Coordinators:**  
Ms. Deepa V B-8884425336  
Dr. Vinoth Kumar K-9944808092

**Student Coordinators:**  
Md. Sagar Khan, Esoft Club-8942916221  
Md. Numan Bhat, Esoft Club-8861841901  
Sarthak Das, Esoft Club-9900787967  
Prajwal, Esoft Club-9535318904  
Ashwini B, Esoft Club-9850345281

**Dr. M Mahesh**  
Professor & HoD-EEE

**...not just software! ...not just for simulation!**

## FACULTY DEVELOPMENT PROGRAM

The Department of EEE organized on Research Challenges in Renewable Energy Technologies – RCRET-2020, from 14<sup>th</sup> to 20<sup>th</sup> of September 2020, 10 AM (IST) for Faculties, Research Scholars from Inside and Outside Engineering Colleges / Universities and Industry, via online ZOOM platform. Congratulations to organizer Dr.Vinothkumar K.

The seven days Faculty development program focused on Recent advances in Smart Grid Technologies, Intelligent Controller in Solar Energy, Research Challenges in Wind Energy Conversion Systems, Integration of Renewable energy sources to Grid, Machine Learning for Smart Grid, An insight to VFD based centrifugal pump efficiency improvements and was conducted successfully with positive feedback from participants.

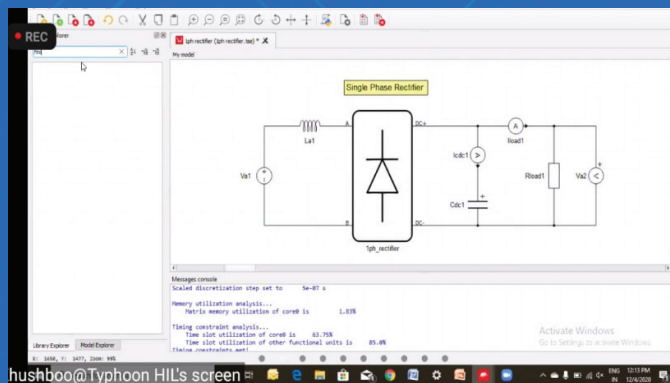


**Pic:** online FDP-Research Challenges in Renewable Energy Technologies



# WORKSHOP DECEMBER EVENTS

The Department of EEE organized “Real-time Simulation Tool for Electrical Engineers-Typhoon HIL” an online workshop aimed to provide hands-on experience on the Hardware in the Loop (HIL) Emulator & Software. Also provided the registered participants the licensed version of Typhoon HIL software during the workshop & provided an exposure to the energy applications like smart grid, renewable energy and distributed generation, etc. The workshop includes practice sessions on the HIL real-time simulation, modelling of single-phase inverter, modelling and simulation of MPPT Boost Charger & Micro Grid controllers and so on as listed in brochure below. Congratulations to Organizing team Mr. Satishkumar D and Mr. Muniprakash.T.



Pic : Real-time Simulation Tool for Electrical Engineers-Typhoon HIL” an online workshop

## SEPTEMBER EVENTS:

Department of EEE organized 4-Days Online Hands-on Workshop using MATLAB & SIMULINK-Research Perspective, from 1st to 4<sup>th</sup> of September 2020, in two Session from 10 AM to 12 PM & 2 PM to 4 PM for Research Scholars and faculty of all the engineering colleges. Simulation is a key part of the Power Electronics and Electric drives design and analysis process. It helps the design engineer to have a better understanding of the circuit operation and possible problems can be discovered in the early phase of the design process. The workshop is to facilitate the modeling of Power Electronics and Drives using MATLAB and SIMULINK in an elegant way and to enrich the participant’s technical skills and was conducted successfully-certificates are provided to participants. Congratulations to Organizing team Dr.MohanDas , Mr. Satishkumar D and Mr.Vinodkumar S faculty of EEE.

### SCHEDULE

**04/12/2020**  
**Session-1- 10:00 AM to 12:00 PM (IST)**  
 • Typhoon HIL Technology  
 • Introduction to Virtual HIL Device  
 • Virtual HIL Device Installation  
 • HIL Academy  
 • Script Editor

**04/12/2020**  
**Session-2- 02:00 PM to 04:00 PM (IST)**  
 • Introduction to Converter and Machine Toolbox  
 • Modelling and Simulation of 1-q Inverter  
 • PV Panel Design and Testing using Typhoon Waveform Generator  
 • Real-time Simulation of MPPT Boost Charger  
 • Real-time Simulation of 3-ph Grid Connected Converter

**05/12/2020**  
**Session-3- 10:00 AM to 12:00 PM (IST)**  
 • Introduction of Power System Toolbox  
 • Modelling and Simulation of IEEE-4 Node System  
 • Demonstration of IEEE-38 Bus System Simulation

**05/12/2020**  
**Session-4- 02:00 PM to 04:00 PM (IST)**  
 • Demonstration of Microgrid (PV, Wind, ESS, Diesel Genset, Variable Loads)  
 • Demonstration of CHIL Simulation using TIF808 controller cards

### CHIEF PATRON

Dr. Mohan Manghani  
Chairman, NHCE, Bangalore

### PATRONS

Dr. Manjunatha  
Principal, NHCE, Bangalore  
 Dr. Gopalakrishnan.K  
Prof & Dean – R&D, NHCE  
 Dr. M S Ganesha Prasad  
Prof, Dean & Head  
Mechanical Engineering

### CONVENER

Dr. Mahesh.M  
Prof & Head  
Electrical and Electronics Engineering

### ORGANIZING COORDINATORS

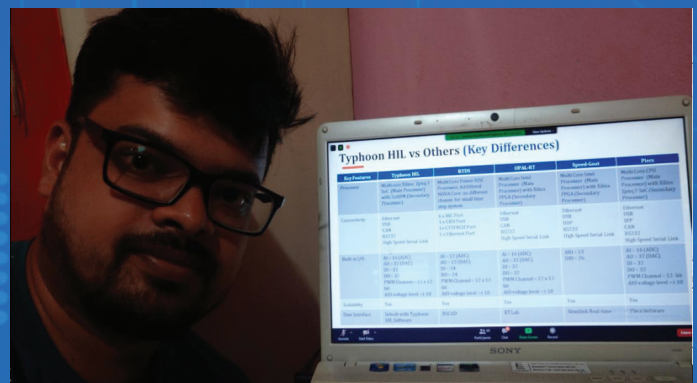
Mr. Satish Kumar D – Sr Assistant Professor  
 Mr. Muni Prakash.T – Sr Assistant Professor

### REGISTRATION FEES

UG/PG Students: 100 INR -/-  
 Academicians/Research Scholars: 200 INR -/-  
 R&D/Industry Personnel: 500 INR -/-

**NEW HORIZON COLLEGE OF ENGINEERING**  
 50<sup>th</sup> Anniversary  
 TWO DAYS ONLINE HANDS-ON NATIONAL WORKSHOP  
 “Real-time Simulation Tool for Electrical Engineers-Typhoon HIL”  
 (Power Electronics & Power Systems Applications)  
 4<sup>th</sup> & 5<sup>th</sup> December 2020  
 Organized by  
 Department of  
 Electrical and Electronics Engineering

In Association with  
  
 Typhoon HIL  
[www.newhorizonindia.edu](http://www.newhorizonindia.edu)



### NEW HORIZON COLLEGE OF ENGINEERING

50<sup>th</sup> Anniversary  
 DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING  
 HANDS-ON WORKSHOP USING MAT LAB & SIMULINK-RESEARCH PERSPECTIVE  
 (4 Days Online Workshop from 01.09.2020 to 04.09.2020)

**DAY:1(01.09.2020) Forenoon**  
 Time:10.00 Am-12.00 Pm(IST)  
**Basics of MAT LAB & SIMULINK**  
 By  
 Mr.Satish Kumar. D  
 Sr Assistant Professor  
 NEW HORIZON COLLEGE OF ENGINEERING

**DAY:2(02.09.2020) Forenoon**  
 Time:10.00 Am-12.00 Pm(IST)  
**PWM Techniques in Power Electronics**  
 By  
 Dr.Bharathiraja.C  
 Associate Professor  
 SRM UNIVERSITY

**DAY:3(03.09.2020) Forenoon**  
 Time:10.00 Am-12.00 Pm(IST)  
**Resurgence of SRM & Drives**  
 By  
 Dr. Jignesh Makwana  
 Founder & Director  
 RhyMak Electronics & Rhynd

**DAY:4(04.09.2020) Forenoon**  
 Time:10.00 Am-12.00 Pm(IST)  
**Microgrid Powersystem & Power quality(Harmonics ) Analysis**  
 By  
 Dr.Aranganjan Vinayagam  
 DEAKIN UNIVERSITY,AUSTRALIA

**DAY:1(01.09.2020) Afternoon**  
 Time:2.00 Pm-4.00 Pm(IST)  
**Power Electronics Converters**  
 By  
 Dr.Kumar.K  
 Associate Professor  
 SV COLLEGE OF ENGINEERING

**DAY:2(02.09.2020) Afternoon**  
 Time:2.00 Pm-4.00 Pm(IST)  
**Renewable Energy Sources Integration with Power Electronics**  
 By  
 Dr.Saravanan.S  
 Assistant Professor  
 SRI KRISHNA COLLEGE OF TECHNOLOGY

**DAY:3(03.09.2020) Afternoon**  
 Time:2.00 Pm-4.00 Pm(IST)  
**Concept of Grid Tied Inverter**  
 By  
 Dr. M. R. Rajan Singaravel  
 Assistant Professor  
 NATIONAL INSTITUTE OF TECHNOLOGY, PUDUCHERRY

**DAY:4(04.09.2020) Afternoon**  
 Time:2.00 Pm-4.00 Pm(IST)  
**Electric Vehicles**  
 By  
 Mr.Sreenivasulu  
 Senior Project Engineer  
 PANTECH SOLUTIONS

Pic: MATLAB & SIMULINK-Research Perspective, an online workshop



## WORKSHOP OCTOBER EVENTS:

Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru, organized National Webinar on "E-Mobility in India" in association with Skill Shark Edu Tech Pvt Ltd., Hyderabad on 26th October 2020, 11:00 AM to 12:30 PM (IST) for industry People, faculty of all the Engineering colleges and Students. Congratulations to organizer Mr. Satishkumar D.

The topics discussed during the webinar are

- Indian Transportation Industry Overview and Future of Mobility in India

- Global and Indian EV Market Segmentation and Types of Electric Vehicles and Key Market Players of Indian EV Industry, EV Ecosystem.



**NEW HORIZON COLLEGE OF ENGINEERING**  
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC  
Accredited by NAAC with 'A' Grade, Accredited by NBA  
New Horizon Knowledge Park, Ring Road, Bellandur Post, Bengaluru 560 103

**IEEE NHCE STUDENT BRANCH**

**Department of Electrical and Electronics Engineering**

Organizing  
*National Webinar*  
on  
**"E-MOBILITY IN INDIA"**  
in Association with  
**SKILL SHARK**

**SPEAKER:**  
Mr. Ashhar Ahmed  
Director, SkillShark Edu Tech  
www.skillshark.in

**TOPICS TO BE COVERED:**

- Indian Transportation Industry overview
- Future of Mobility in India
- Global and Indian EV Market segmentation
- Types of Electric vehicles
- Key Market players of Indian EV Industry
- EV Ecosystem

**DATE:** 26/10/2020  
**TME:** 11:00 AM to 12:30 PM (IST)

**No Registration Fee**  
**REGISTER HERE:** [www.tiny.cc/nhceee](http://www.tiny.cc/nhceee)

**PATRON**  
Dr. Manjunatha  
Principal, NHCE

**CONVENER**  
Dr. Mahesh M  
Professor & Head, EEE Department, NHCE

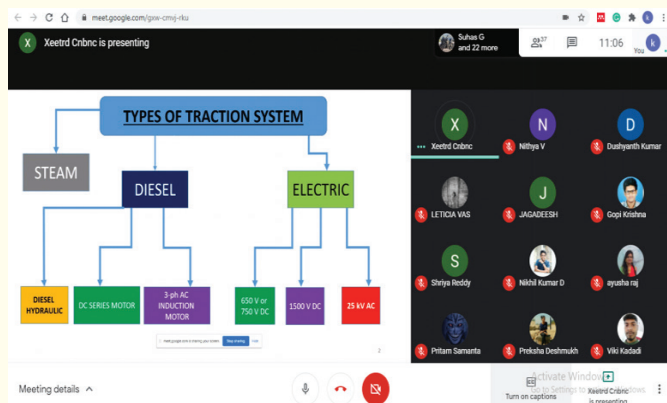
**FACULTY COORDINATOR**  
Mr. D. Satishkumar - 9036488496  
Sr Asst Professor, EEE Department, NHCE

**Pic:** National Webinar on "E-Mobility in India"

## EXPERT/GUEST LECTURE DECEMBER EVENTS :

The Department of Electrical and Electronics Engineering organized a Guest Lecture on "Electric Traction Systems & Employment Opportunities In Indian Railways" on 10th December 2020 through Google-meet online platform. This guest lecture is a part of a curriculum named Utilization of Electrical Energy (EEE741) for the VII semester students. The guest speaker was Mr C.T ANTO, Electrical Executive Engineer, Indian Railways, South Western Railway, Bengaluru. The speaker explained the practical concepts of electric traction and the traction control in Indian railways. He has given the details of employment opportunities in Indian railways which motivated the students in many aspects.

The Department of EEE organized a guest lecture on "Applications of Signal Processing" on 11th December 2020, organized by faculty Mrs. Rashmi N, for 5th semester EEE students. The resource person Dr. Guruprasad S holds a doctorate in field of signals and systems. The session was interactive, students interacted with experts for clarifying all their doubts. Session provided a platform to students to express their ideas, clarify doubts, gain knowledge of image processing applications and which gives a practical approach to their course. The participants admired the session and gained knowledge. Congratulation to organizer.



**Pic:** Online guest lecture event for EEE 7<sup>th</sup> semester students



**Pic:** Online guest lecture event for EEE 5<sup>th</sup> semester students



## NOVEMBER EVENTS:

The Department of EEE, New Horizon College of Engineering organized an online Expert Lecture on Introduction to Matlab and Simulink-7<sup>th</sup> November 2020, for 3<sup>rd</sup> semester students, from the expert lecture, students will be able to know what MATLAB / Simulink is and how to get started with MATLAB/Simulink. Basics of MATLAB/Simulink to solve simple and complex problems. Congratulations to organizers.

**NEW HORIZON COLLEGE OF ENGINEERING**  
50<sup>th</sup> Anniversary  
Department of Electrical and Electronics Engineering  
Online Expert Lecture  
on  
**Introduction to Matlab and Simulink**  
In association with **CoreEL Technologies**  
Time: 11:00 am to 12:00 pm  
November 7  
CLICK HERE  
MATLAB Mobile  
Dr. M. Mahesh  
Professor & HoD -EEE  
Event Organizers:  
Faculty Coordinator:  
Ms. Roopa C :- +91 90365 51500  
Mr. Mohan B S:- +91 81234 06405  
E-Certificate of Completion

Pic: Expert Lecture on- Introduction to Matlab and Simulink

The Department of EEE, New Horizon College of Engineering organized an Expert Lecture on "Role of Synchronous Machines in Industry" in association with Danfoss Industries Pvt Ltd, Chennai on 04<sup>th</sup> November 2020 at 10AM – 12 PM (IST), will defined the concept of current research trends in synchronous machines in industry. Mr. V.K Arun Shankar, Testing Engineer, Danfoss Drives Segment - R&D (SW), Sriperumbudur served as resource person for an Expert Lecture and delivered a speech on a large collection of synchronous motors and generators is available with a wide range of industrial applications. He also mentioned that electric motors have become an integral part of industrial production and convert electrical energy into mechanical energy, enabling industrial machines to perform the tasks assigned to them. Not all the electric motors perform a similar set of tasks, but some of them are specifically designed for an industry. Typical applications of these low power motors are positioning machines. They are also used in robot actuators and such motors are available in a range from horseshoe size to industrial high performance size.

The program covered the following important aspects namely applications of synchronous machines in Danfoss. The eminent expert from Industry delivered the lecture and his talk has been very well received by the participants.

Arun Shankar is presenting

**Electric bus revolution**  
Taipei buses driving the electrical bus

- Technical specifications
  - Synchronous reluctance assisted permanent magnet technology, IP65, EM PM motor, 189 kW
  - EC-C1200-430 inverter, IP67, CAN protocol
  - PowerUSER software designed by Danfoss Edition
- Benefits
  - Zero emissions
  - Space and weight savings
  - Higher efficiency
  - Less audible noise
  - Lower maintenance costs
  - Less risk of system failure

People (84)  
Chat  
Add people  
vinoth kumar (You)  
Abhishek Kumar  
Ananda  
anirudh ks  
Arun Shankar (Presentation)  
Arun Shankar  
Ashu Anand  
Ashwini Lokare  
Ateeq Rahman

Arun Shankar, Kiran K.V., Nischal Dinesh, yuva shekar, shaik adil, lakshmi pathi, Ashwini Loka...

Pic: Expert Lecture on "Role of Synchronous Machines in Industry"



## INDUSTRIAL VISIT

### DECEMBER EVENT:

The Department of EEE organized virtual industrial visit from 400kV/220kV substation KPTCL on 10<sup>th</sup> Dec 2020 at 2PM onwards via ZOOM online platform for the 5<sup>th</sup> & 7<sup>th</sup> semester students of EEE dept. of NHCE.

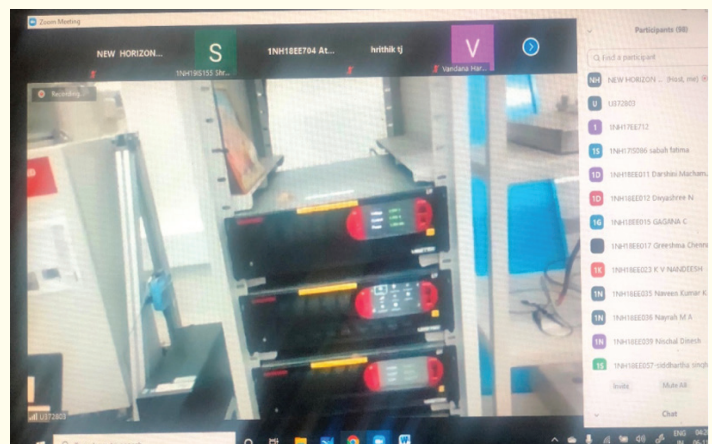
Resource people are engineers of substation Nelamangala, accepted our request to organize the session of substation visit which was needed during this pandemic to the students. The Session brief about single diagram of substation and connected equipments. Students viewed live equipments like CT, PT, circuit breakers, reactors bay etc and operations are briefed by junior engineer and execute engineer. Also, assistant engineer explained about power sector connection. All this made a session informative, interesting and gained knowledge to the participants.

Almost nearly 115 students from 5<sup>th</sup> semester and 124 students participated from 7<sup>th</sup> semester EEE. Congratulations to organizer Mrs.Rashmi N, faculty of EEE Department for interacting and getting permission from the engineers to organize the event with a grand success.



Pic: virtual industrial visit from 400kV/220kV substation via ZOOM online

The Department of EEE, New Horizon College of Engineering organized an Industrial Visit in association with Danfoss Industries Pvt Ltd, Chennai on 6<sup>th</sup> November 2020 through Virtual Online mode by ZOOM Platform. Mr. V.K Arun Shankar, Testing Engineer, Danfoss Drives Segment - R&D (SW), Sriperumbudur demonstrated the experimental setup at Software Testing Laboratory, R&D sector. He explained an NI-Test stand based VFD test setup, Power card and Option cards testing Setup, Hardware in Loop test setup, Aqua Pump setup for VFD, Drive efficiency Test setup and Intelligent Motor Control of synchronous motors and generators is available with a wide range of industrial applications.



Pic: virtual industrial visit from Danfoss Industries Pvt Ltd. Sriperumbudur

The program covered the following important aspects available in Danfoss. The eminent expert from Industry delivered the lecture and his talk has been very well received by the participants and nearly 115 students participated from III B.E EEE, ISE, Mechanical branch 5<sup>th</sup> semester.



# NEW HORIZON COLLEGE OF ENGINEERING

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## VISION

To emerge as an institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence.

## MISSION

- To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research & innovation among faculty members and students.
- To encourage long-term interaction between the academia and industry through their involvement in the design of curriculum and its hands-on implementation.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.

## QUALITY POLICY

- To provide educational services of the highest quality both curricular and co-curricular to enable students integrate skills and serve the industry and society equally well at global level.

**VALUES:** Academic Freedom, Integrity, Inclusiveness, Innovation, Professionalism, Social Responsibility

